INDEX TO VOLUME 105

INDEX TO SUBJECTS

A-Type, A Study of the Spectrum Variables of. *Armin J. Deutsch* 283

Absolute Magnitudes of Be Stars, Radial Velocities and. *Burke Smith* 489

R Andromedae, Atomic Lines in the Spectrum of. *Paul W. Merrill* 360

Z Andromedae in August, 1946, The Spectrum of. *Paul W. Merrill* 120

56 Arietis, The Period of the Spectrum Variable. *Armin J. Deutsch* 503

Atmospheric Temperatures from Infrared Emission Spectra of the Moon and Earth. I. The Ozone Layer. *Arthur Adel* 406

Atomic Lines in the Spectrum of R Andromedae. *Paul W. Merrill* 360

Barnard's Photographs of Mars. *Gerard P. Kuiper and Mary R. Calvert* 215

Be Stars, Radial Velocities and Absolute Magnitudes of. *Burke Smith* 489

Broadening of Neutral Helium Lines in Stellar Spectra, On the. *Margaret K. Krogdahl* 327

β Canis Majoris, The Spectral Type and Luminosity of. *Anne B. Underhill* . . . 502

VV Cephei, Changes in the Infrared Spectrum of. *P. C. Keenan and J. A. Hynek* . 500

Chromosphere, An Interpretation of the Heights of Lines in the Solar. *Rupert Wildt* 36

Chromospheric Spectrum from Ten Eclipse Expeditions. *S. A. Mitchell* 1

Cluster in Perseus, The M-Type Supergiant Members of the Double. *W. P. Bidelman* 492

Coronal and Other Forbidden Lines, The Relative Intensities of the. *I. S. Bowen and P. Swings* 92

Corpuscular Radiation from the Sun, A Slow. *K. O. Kiepenheuer* 408

Cosmic Grains, The Physics of. *Felix Cernuschi* 241

Dwarf Stars, Radial Velocities and Spectral Types of 181. *Alfred H. Joy* . . . 96

Early-Type Stars, Infrared Spectra of. *W. A. Hiltner* 212

Earth, Atmospheric Temperatures from Infrared Emission Spectra of the Moon and. I. The Ozone Layer. *Arthur Adel* 406

Eclipse Expeditions, Chromospheric Spectrum from Ten. *S. A. Mitchell* . . . 1

ECLIPSING SYSTEM RX GEMINORUM, NOTE ON THE. *Sergei Gaposchkin* 499

ECLIPSING SYSTEM RY PERSEI, THE. *Frank Bradshaw Wood* 498

ECLIPSING SYSTEM UX MONOCEROTIS, THE. *Sergei Gaposchkin* 258

ECLIPSING VARIABLE TX URSAE MAJORIS, A PHOTOELECTRIC STUDY OF THE. *C. M. Huffer and Olin J. Eggen* 217

ELECTRON VELOCITY DISTRIBUTION IN GASEOUS NEBULAE AND STELLAR ENVELOPES, THE. *David Bohm and Lawrence H. Aller* 131

FAINT BLUE STARS, A SEARCH FOR. *M. L. Humason and F. Zwicky* 85

FORBIDDEN LINES, THE RELATIVE INTENSITIES OF THE CORONAL AND OTHER. *I. S. Bowen and P. Swings* 92

RX GEMINORUM, NOTE ON THE ECLIPSING SYSTEM. *Sergei Gaposchkin* 499

GLOBULAR CLUSTERS MESSIER 3 AND MESSIER 13, SPECTRAL TYPES OF STARS IN THE. *Daniel M. Popper* 204

HD 157978–9, A NEW SPECTROSCOPIC TRIPLE STAR. *Dean B. McLaughlin* 497

HEAVY ELEMENTS, ON THE ORIGIN OF THE. *G. B. van Albada* 393

HELIUM LINES IN STELLAR SPECTRA, ON THE BROADENING OF NEUTRAL. *Margaret K. Krogdahl* 327

INFRARED ATMOSPHERIC OXYGEN BANDS, FINE STRUCTURE OF THE. *L. Herzberg and G. Herzberg* 353

INFRARED EMISSION SPECTRA OF THE MOON AND EARTH, ATMOSPHERIC TEMPERATURES FROM. I. THE OZONE LAYER. *Arthur Adel* 406

INFRARED SPECTRA OF EARLY-TYPE STARS. *W. A. Hiltner* 212

INFRARED SPECTRUM OF VV CEPHEI, CHANGES IN THE. *P. C. Keenan and J. A. Hynek* . 500

INTENSITIES OF THE CORONAL AND OTHER FORBIDDEN LINES, THE RELATIVE. *I. S. Bowen and P. Swings* 92

LINES OF *V* I, RELATIVE *gf*-VALUES FOR. *Robert B. King* 376

LUMINOSITY OF β CANIS MAJORIS, THE SPECTRAL TYPE AND. *Anne B. Underhill* . . . 502

LUMINOSITY FUNCTIONS OF THE BRIGHTER STARS. *John W. Abrams* 268

MARS, BARNARD'S PHOTOGRAPHS OF. *Gerard P. Kuiper and Mary R. Calvert* 215

MESSIER 3 AND MESSIER 13, SPECTRAL TYPES OF STARS IN THE GLOBULAR CLUSTERS. *Daniel M. Popper* 204

MILKY WAY, INTERPRETATION OF RADIO RADIATION FROM THE. *Charles Hard Townes* . 235

β MONOCEROTIS A, RECENT CHANGES IN THE SPECTRUM OF. *Arne Slettebak* 502

UX MONOCEROTIS, THE ECLIPSING SYSTEM. *Sergei Gaposchkin* 258

MOON AND EARTH, ATMOSPHERIC TEMPERATURES FROM INFRARED EMISSION SPECTRA OF THE. I. THE OZONE LAYER. *Arthur Adel* 406

M-TYPE SUPERGIANT MEMBERS OF THE DOUBLE CLUSTER IN PERSEUS, THE. *W. P. Bidelman* 492

NEBULAE, SMALL DARK. *Bart J. Bok and Edith F. Reilly* 255

NEBULAE AND STELLAR ENVELOPES, THE ELECTRON VELOCITY DISTRIBUTION IN GASEOUS. *David Bohm and Lawrence H. Aller* 131

ORBIT OF σ PISCIUM, THE SPECTROSCOPIC. *Emilia Pisani Belserene* 229

ORIGIN OF THE HEAVY ELEMENTS, ON THE. *G. B. van Albada* 393

OXYGEN BANDS, FINE STRUCTURE OF THE INFRARED ATMOSPHERIC. *L. Herzberg and G. Herzberg* 353

OZONE LAYER. ATMOSPHERIC TEMPERATURES FROM INFRARED EMISSION SPECTRA OF THE MOON AND EARTH. I. THE. *Arthur Adel* 406

AW PEGASI. *Lois T. Slocum* 350

RY PERSEI, THE ECLIPSING SYSTEM. *Frank Bradshaw Wood* 498

PERSEUS, THE M-TYPE SUPERGIANT MEMBERS OF THE DOUBLE CLUSTER IN. *W. P. Bidelman* 492

PHOTOELECTRIC STUDY OF THE ECLIPSING VARIABLE TX URSAE MAJORIS, A. *C. M. Huffer and Olin J. Eggen* 217

σ PISCIUM, THE SPECTROSCOPIC ORBIT OF. *Emilia Pisani Belserene* 229

R STARS, THE SPACE MOTIONS OF THE. *Noah W. McLeod* 390

RADIAL VELOCITIES AND ABSOLUTE MAGNITUDES OF Be STARS. *Burke Smith* 489

RADIAL VELOCITIES AND SPECTRAL TYPES OF 181 DWARF STARS. *Alfred H. Joy* 96

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XIII. ON THE. *S. Chandrasekhar* . 151

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XIV. ON THE. *S. Chandrasekhar* . 164

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XV. ON THE. *S. Chandrasekhar* . 424

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XVI. ON THE. *S. Chandrasekhar and Frances H. Breen* 435

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XVII. ON THE. *S. Chandrasekhar* 441

RADIATIVE EQUILIBRIUM OF A STELLAR ATMOSPHERE. XVIII. ON THE. *S. Chandrasekhar and Frances H. Breen* 461

RADIO RADIATION FROM THE MILKY WAY, INTERPRETATION OF. *Charles Hard Townes* . 235

REVIEWS:

ABBOT, C. G. *The Earth and the Stars* 216

COOPER, HERBERT J. (ed.). *Scientific Instruments* (W. A. Hiltner) 216

MATHEMATICAL TABLES PROJECT, NATIONAL BUREAU OF STANDARDS. *Tables of Spherical Bessell Functions*, Vol. I 506

MELLOR, J. W. *Higher Mathematics for Students of Chemistry and Physics* 216

MILLER, FREEMAN D. *Astronomy* 506

PLEDGE, H. T. *Science since 1500: A Short History of Mathematics, Physics, Chemistry, Biology* (O. Struve) 505

The Soochow Astronomical Chart. Translated by W. Carl Rufus and Hsing-Chih Tien (O. Neugebauer) 505

RIGEL WITH HIGH DISPERSION, SPECTROSCOPIC OBSERVATIONS OF. *Roscoe F. Sanford* . 222

SOLAR CHROMOSPHERE, AN INTERPRETATION OF THE HEIGHTS OF LINES IN THE. *Rupert Wildt* 36

SOLAR CORONA, ZODIACAL LIGHT IN THE. *H. C. van de Hulst* 471

SPACE MOTIONS OF THE R STARS, THE. *Noah W. McLeod* 390

SPECTRAL TYPE AND LUMINOSITY OF β CANIS MAJORIS, THE. *Anne B. Underhill* . . . 502

SPECTRAL TYPES OF 181 DWARF STARS, RADIAL VELOCITIES AND. *Alfred H. Joy* . . . 96

SPECTRAL TYPES OF STARS IN THE GLOBULAR CLUSTERS MESSIER 3 AND MESSIER 13. *Daniel M. Popper* 204

SPECTROSCOPIC OBSERVATIONS OF RIGEL WITH HIGH DISPERSION. *Roscoe F. Sanford* . 222

SPECTROSCOPIC ORBIT OF σ PISCIUM, THE. *Emilia Pisani Belserene* 229

SPECTRUM OF R ANDROMEDAE, ATOMIC LINES IN THE. *Paul W. Merrill* 360

SPECTRUM OF Z ANDROMEDAE IN AUGUST, 1946, THE. *Paul W. Merrill* 120

SPECTRUM OF β MONOCEROTIS A, RECENT CHANGES IN THE. *Arne Slettebak* 502

SPECTRUM VARIABLE 56 ARIETIS, THE PERIOD OF THE. *Armin J. Deutsch* 503

SPECTRUM VARIABLES OF TYPE A, A STUDY OF THE. *Armin J. Deutsch* 283

STARS, LUMINOSITY FUNCTIONS OF THE BRIGHTER. *John W. Abrams* 268

STARS, A SEARCH FOR FAINT BLUE. *M. L. Humason and F. Zwicky* 85

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XIII. *S. Chandrasekhar* . 151

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XIV. *S. Chandrasekhar* . 164

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XV. *S. Chandrasekhar* . 424

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XVI. *S. Chandrasekhar and Frances H. Breen* 435

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XVII. *S. Chandrasekhar* 441

STELLAR ATMOSPHERE, ON THE RADIATIVE EQUILIBRIUM OF A. XVIII. *S. Chandrasekhar and Frances H. Breen* 461

STELLAR ENVELOPES, THE ELECTRON VELOCITY DISTRIBUTION IN GASEOUS NEBULAE AND. *David Bohm and Lawrence H. Aller* 131

STELLAR MODELS WITH CONVECTION AND WITH DISCONTINUITY OF THE MEAN MOLECULAR WEIGHT. *P. Ledoux* 305

STELLAR MODELS WITH ISOTHERMAL CORES AND POINT-SOURCE ENVELOPES. *Marjorie Hall Harrison* 322

STELLAR SPECTRA, ON THE BROADENING OF NEUTRAL HELIUM LINES IN. *Margaret K. Krogdahl* 327

STELLAR SPECTRA, ZEEMAN EFFECT IN. *H. W. Babcock* 105

SUM RULES FOR TRANSITION ARRAYS, EXTENDED. *Donald H. Menzel* 126

SUN, A SLOW CORPUSCULAR RADIATION FROM THE. *K. O. Kiepenheuer* 408

SUPERGIANT MEMBERS OF THE DOUBLE CLUSTER IN PERSEUS, THE M-TYPE. *W. P. Bidelman* 492

TRANSITION ARRAYS, EXTENDED SUM RULES FOR. *Donald H. Menzel* 126

TRIPLE STAR, HD 157978–9, A NEW SPECTROSCOPIC. *Dean B. McLaughlin* 497

TRUMPLER STARS, THE. *O. Struve* 499

TX URSAE MAJORIS, A PHOTOELECTRIC STUDY OF THE ECLIPSING VARIABLE. *C. M. Huffer and Olin J. Eggen* 217

V I, RELATIVE *gf*-VALUES FOR LINES OF. *Robert B. King* 376

ZEEMAN EFFECT IN STELLAR SPECTRA. *H. W. Babcock* 105

ZODIACAL LIGHT IN THE SOLAR CORONA. *H. C. van de Hulst* 471

INDEX TO AUTHORS

ABRAMS, JOHN W. Luminosity Functions of the Brighter Stars 268

ADEL, ARTHUR. Atmospheric Temperatures from Infrared Emission Spectra of the Moon and Earth. I. The Ozone Layer 406

ALLER, LAWRENCE H., and DAVID BOHM. The Electron Velocity Distribution in Gaseous Nebulae and Stellar Envelopes 131

BABCOCK, H. W. Zeeman Effect in Stellar Spectra 105

BELSERENE, EMILIA PISANI. The Spectroscopic Orbit of σ Piscium 229

BIDELMAN, W. P. The M-Type Supergiant Members of the Double Cluster in Perseus . 492

BOHM, DAVID, and LAWRENCE H. ALLER. The Electron Velocity Distribution in Gaseous Nebulae and Stellar Envelopes 131

BOK, BART J., and EDITH F. REILLY. Small Dark Nebulae 255

BOWEN, I. S., and P. SWINGS. The Relative Intensities of the Coronal and Other Forbidden Lines 92

BREEN, FRANCES H., and S. CHANDRASEKHAR. On the Radiative Equilibrium of a Stellar Atmosphere. XVI 435

BREEN, FRANCES H., and S. CHANDRASEKHAR. On the Radiative Equilibrium of a Stellar Atmosphere. XVIII 461

CALVERT, MARY R., and GERARD P. KUIPER. Barnard's Photographs of Mars 215

CERNUSCHI, FELIX. The Physics of Cosmic Grains 241

CHANDRASEKHAR, S. On the Radiative Equilibrium of a Stellar Atmosphere. XIII . . 151

CHANDRASEKHAR, S. On the Radiative Equilibrium of a Stellar Atmosphere. XIV . . 164

CHANDRASEKHAR, S. On the Radiative Equilibrium of a Stellar Atmosphere. XV . . 424

CHANDRASEKHAR, S., and FRANCES H. BREEN. On the Radiative Equilibrium of a Stellar Atmosphere. XVI 435

CHANDRASEKHAR, S. On the Radiative Equilibrium of a Stellar Atmosphere. XVII . . 441

CHANDRASEKHAR, S., and FRANCES H. BREEN. On the Radiative Equilibrium of a Stellar Atmosphere. XVIII 461

DEUTSCH, ARMIN J. The Period of the Spectrum Variable 56 Arietis 503

DEUTSCH, ARMIN J. A Study of the Spectrum Variables of Type A 283

EGGEN, OLIN J., and C. M. HUFFER. A Photoelectric Study of the Eclipsing Variable, TX Ursae Majoris 217

GAPOSCHKIN, SERGEI. The Eclipsing System UX Monocerotis 258

GAPOSCHKIN, SERGEI. Note on the Eclipsing System RX Geminorum 499

HARRISON, MARJORIE HALL. Stellar Models with Isothermal Cores and Point-Source Envelopes 322

HERZBERG, G., and L. HERZBERG. Fine Structure of the Infrared Atmospheric Oxygen Bands 353

HILTNER, W. A. Infrared Spectra of Early-Type Stars 212

HILTNER, W. A. Review of: *Scientific Instruments*, edited by Herbert J. Cooper . . . 216

HUFFER, C. M., and OLIN J. EGGEN. A Photoelectric Study of the Eclipsing Variable, TX Ursae Majoris 217

HUMASON, M. L., and F. ZWICKY. A Search for Faint Blue Stars 85

HYNEK, J. A., and P. C. KEENAN. Changes in the Infrared Spectrum of VV Cephei . 500

JOY, ALFRED H. Radial Velocities and Spectral Types of 181 Dwarf Stars 96

KEENAN, P. C., and J. A. HYNEK. Changes in the Infrared Spectrum of VV Cephei . . 500

KIEPENHEUER, K. O. A Slow Corpuscular Radiation from the Sun 408

KING, ROBERT B. Relative *gf*-Values of Lines of *V* I 376

KROGDAHL, MARGARET K. On the Broadening of Neutral Helium Lines in Stellar Spectra 327

KUIPER, GERARD P., and MARY R. CALVERT. Barnard's Photographs of Mars . . . 215

LEDOUX, P. Stellar Models with Convection and with Discontinuity of the Mean Molecular Weight 305

MCLAUGHLIN, DEAN B. A New Spectroscopic Triple Star, HD 157978–9 497

MCLEOD, NOAH W. The Space Motions of the R Stars 390

MENZEL, DONALD H. Extended Sum Rules for Transition Arrays 126

MERRILL, PAUL W. Atomic Lines in the Spectrum of R Andromedae 360

MERRILL, PAUL W. The Spectrum of Z Andromedae in August, 1946 120

MITCHELL, S. A. Chromospheric Spectrum from Ten Eclipse Expeditions 1

NEUGEBAUER, O. Review of: *The Soochow Astronomical Chart*, translated by W. Carl Rufus and Hsing-Chih Tien 505

POPPER, DANIEL M. Spectral Types of Stars in the Globular Clusters Messier 3 and Messier 13 204

REILLY, EDITH F., and BART J. BOK. Small Dark Nebulae 255

SANFORD, ROSCOE F. Spectroscopic Observations of Rigel with High Dispersion . . . 222

SLETTEBAK, ARNE. Recent Changes in the Spectrum of β Monocerotis A 502

SLOCUM, LOIS T. AW Pegasi 350

SMITH, BURKE. Radial Velocities and Absolute Magnitudes of Be Stars 489

STRUVE, O. Review of: *Science since 1500: A Short History of Mathematics, Physics, Chemistry, Biology*, H. T. Pledge 505

STRUVE, O. The Trumpler Stars 499

SWINGS, P., and I. S. BOWEN. The Relative Intensities of the Coronal and Other Forbidden Lines 92

TOWNES, CHARLES HARD. Interpretation of Radio Radiation from the Milky Way . . 235

UNDERHILL, ANNE B. The Spectral Type and Luminosity of β Canis Majoris . . . 502

VAN ALBADA, G. B. On the Origin of the Heavy Elements 393

VAN DE HULST, H. C. Zodiacal Light in the Solar Corona 471

WILDT, RUPERT. An Interpretation of the Heights of Lines in the Solar Chromosphere . 36

WOOD, FRANK BRADSHAW. The Eclipsing System RY Persei 498

ZWICKY, F., and M. L. HUMASON. A Search for Faint Blue Stars 85

350
489
505
499
92
35
02
93
71
36
98
85